UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,625	04/12/2004	Michael Krebs	HENK-0066/H5395	3301

38857 7590 12/14/2006

WOODCOCK WASHBURN LLP
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

EXAMINER	
NILAND, PATRICK DENNIS	
ART UNIT	**PAPER NUMBER**
1714	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/822,625	KREBS ET AL.	
	Examiner	Art Unit	
	Patrick D. Niland	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment of 9/20/06 has been entered. Claims 1-31 are pending.

2. See MPEP 2111.03 [R-3] Transitional Phrases for "consisting essentially of": The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original) (Prior art hydraulic fluid required a dispersant which appellants argued was excluded from claims limited to a functional fluid "consisting essentially of" certain components. In finding the claims did not exclude the prior art dispersant, the court noted that appellants' specification indicated the claimed composition can contain any well-known additive such as a dispersant, and there was no evidence that the presence of a dispersant would materially affect the basic and novel characteristic of the claimed invention. The prior art composition had the same basic and novel characteristic (increased oxidation resistance) as well as additional enhanced detergent and dispersant characteristics.). "A consisting essentially of' claim occupies a middle ground between closed claims that are written in a consisting of' format and fully open claims that are drafted in a comprising' format." PPG Industries v. Guardian Industries, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). See also Atlas Powder v. E.I. duPont de Nemours & Co., 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); In re Janakirama-Rao, 317 F.2d 951, 137 USPQ 893 (CCPA 1963); Water Technologies Corp. vs. Calco, Ltd., 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). **For the purposes of searching for and applying prior**

art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). See also AK Steel Corp. v. Sollac, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003) (Applicant's statement in the specification that "silicon contents in the coating metal should not exceed about 0.5% by weight" along with a discussion of the deleterious effects of silicon provided basis to conclude that silicon in excess of 0.5% by weight would materially alter the basic and novel properties of the invention. Thus, "consisting essentially of" as recited in the preamble was interpreted to permit no more than 0.5% by weight of silicon in the aluminum coating.).

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/873884. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ in scope, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the polyurethane of the copending application using the instantly claimed amounts of 2,4' diphenylmethane diisocyanate as the polyisocyanate of the copending claimed polyurethane hotmelt adhesive because the copending claims 4 and 6 specify the claimed polyisocyanate as being 2,4' diphenylmethane diisocyanate which falls within the scope of the instant claims 1, 6-8 and the other claimed isocyanate amounts. See claims 7-10 for the instantly claimed polyols. They are expected to

have the properties of the instant claims 9-12 since their identities and molecular weights match those of the instant claims. Since they are thermoplastic they can melt and therefore will melt and therefore will stick to something, i.e. they are hot melt adhesives. Where excess NCO is used they are also clearly reactive. The copending method claims use the instantly claimed temperatures. Claim 3 and the use of the lower amounts of monomeric isocyanate of claim 14 are expected to give the instantly claimed monomeric isocyanate contents of the instant claims 20-21 and 24-25. See claims 18-19. Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid. Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. Copending claim 2 encompasses the instantly claimed molecular weights, particularly if they are weight average molecular weights as do the polyol molecular weights of claims 7 and 9. The offer of amendment or terminal disclaimer is noted. The applicant does not particularly point out and show any errors in the above rejection. This rejection is therefore maintained.

5. Claims 1-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/703341. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ in scope, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the polyurethane of the copending application using the instantly claimed amounts of 2,4' diphenylmethane diisocyanate

as the polyisocyanate of the copending claimed polyurethane hotmelt adhesive because the copending specification defines the claimed polyisocyanate as being 2,4' diphenylmethane diisocyanate at page 12, line 38, which falls within the scope of the instant claims 1, 6-8, and the other claimed isocyanate amounts and defines the polyols of their claims such that they fall within the scope of those of the instant claims, e.g. the paragraph bridging pages 13-14 of the copending specification. See the tackiness of claim 1 and its requirement of a polyester coupled with the copending specification's definition of the polymeric constituents of claim 1 as being polyurethanes at page 12, lines 25-28. It would be understood that the achievement of the claimed tackiness would require the instantly claimed polyester polyols. The lowest temperature of the copending claim 9 reads on the temperatures of the instant process claims. The free NCO groups of the claims make them clearly reactive. The copending method claims use the instantly claimed temperatures. Claim 3 and the use of the lower amounts of monomeric isocyanate indicated by the presence of only one NCO group of claim 1 are expected to give the instantly claimed monomeric isocyanate contents of the instant claims 20-21 and 24-25. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. The offer of amendment or terminal

disclaimer is noted. The applicant does not particularly point out and show any errors in the above rejection. This rejection is therefore maintained.

6. Claims 1-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/871343. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ in scope, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the polyurethane of the copending application using the instantly claimed amounts of 2,4' diphenylmethane diisocyanate as the polyisocyanate of the copending claimed polyurethane reactive hotmelt adhesive of copending claim 19 because the copending claim 17 recites the use of 2,4 diphenylmethane diisocyanate which falls within the scope of the instantly claimed amounts of isocyanates of claims 1, 6-8, and the other claimed isocyanate amounts. See all of the claims particularly claims 11-16 for the instantly claimed polyols. The temperature of the copending method claims is not specified as being above that of the instant claims. Copending claim 9 encompasses the instantly claimed monomeric isocyanate content of claims 20-21 and 24-25. Where there is only slight excess NCO, the instantly claimed monomeric isocyanate contents are particularly expected. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt" of copending claim 19. Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the

copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. The argument that the copending claims are directed to methods and the instant claims are directed to compositions is not persuasive in that the copending claims 18-25 are directed to compositions or their final products of which the intermediate would fall within the instantly claimed compositions for the reasons stated above. The molecular weight of copending claim 16 falls within the scope of that of the instant claims. In view of In res Ochiai and Brouer, rejoinder of methods with their composition claims is required. There was apparently no restriction in either application. The subject matter of claims 18-25 shows that the copending claims are intended to cover compositions and the compositions resulting from the method claims are the obvious variants of these compositions. Thus, to the extent the composition claims of the copending application make the instant claims obvious, it is the examiner's position that the other method claims also make obvious the limitations therein to the composition claims of the copending application. The applicant's arguments do not address the copending composition claims. This rejection is therefore maintained.

7. Claims 1-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-27 of copending Application No. 10/755702. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ in scope, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the polyurethane of the copending application using the instantly claimed amounts of 2,4' diphenylmethane diisocyanate as the polyisocyanate of the copending claimed polyurethane reactive hotmelt (claim 27 using

the higher molecular weight polyols of claim 26 and of the instant claims) adhesive of the copending claims because the copending claims recite the copending claimed polyisocyanate as being 2,4 diphenylmethane diisocyanate in claims 1 and 6-8 and being within the instantly claimed amounts. See all of the claims for the instantly claimed polyols particularly claim 26. The temperature of the copending method recited in the copending adhesive claims is that of the instant method claims. See particularly claims 6-7. Where there is only slight excess NCO, the instantly claimed monomeric isocyanate contents of the instant claims 20-21 and 24-25 are encompassed and are particularly expected and claim 3 requires such amounts of monomeric isocyanate. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid. Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. The fact that the instant claims are directed to a product and the copending claims are directed to a method does not preclude the instant obviousness type double patenting rejection. The copending application had several "composition" claims pending and examined. There was no restriction between the method and composition claims by the examiner. Therefore, MPEP 804: "Generally, a double patenting rejection is not

permitted where the claimed subject matter is presented in a divisional application as a

result of a restriction requirement made in a parent application under 35 U.S.C. 121." does not apply. See MPEP 804.01: The following are situations where the prohibition *>against< double patenting rejections

under 35 U.S.C. 121 does not apply:

(A) The applicant voluntarily files two or more applications without a restriction requirement by the examiner. >35 U.S.C. 121 requires claims of a divisional application to have been formally entered, restricted, and removed from an earlier application in order to obtain the benefit of 35 U.S.C. 121. This seems to be the case in the instant situation. The method claims of the copending application result in a product which falls within the scope of the product of the instant claims for the reasons stated above. This would be clear to the ordinary skilled artisan. Thus the product of the copending method claims would be obvious to the skilled artisan who knows what the copending method makes as its final result. Furthermore, In res Brouer and Ochiai would require rejoinder even if a restriction were made. No prohibition is seen to the instant obviousness type double patenting rejection of the instant product claims based on copending method claims having the instant fact situation. This rejection is therefore maintained.

8. Claims 1-22, 24-25, and 27-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No. 5994493 Krebs. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ somewhat in scope, it would have been obvious to one of ordinary skill in the art to practice the instantly claimed inventions from the claims of the patentee because the patented claims encompass the instantly claimed

invention. Moisture curing hotmelt adhesive encompasses the instantly claimed reactive adhesives. Any additional reactants of the patented claims are encompassed by "comprising" of the instant claims. "Liquid" of the patented claims polyol is expected to include "partly crystalline" polyols where the polyols of the patented claims have the upper molecular weights and linear, non-branched segments. These crystalline segments may be solvated by the other amorphous segments to give liquid final product. This reads on the instant claim 12. The patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 7, lines 1-6 of their specification and claims 18 and 29. The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 14-17, 19, and 22 based on the definition of average molecular weight. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. The claimed NCO:OH ratios encompass those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21 and 24-25 are encompassed. The use of only 2,4' MDI encompasses the instant claims 6-8. Free monomeric isocyanate meets the instant claim 14. The process claims are silent regarding reaction temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29 because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. Claim 1 has molecular weights falling within the scope of those of the instant claims. This rejection is therefore maintained.

9. Claims 1-22, 24-25, and 31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6906148 Krebs et al.. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ somewhat in scope, it would have been obvious to one of ordinary skill in the art to practice the instantly claimed inventions from the claims of the patentee because the patented claims encompass the instantly claimed invention. Reactive hotmelt adhesives are inherent to those of the patentee's claims where component a contains OH or NCO groups as both are reactive and the claims encompass the instantly claimed reactive adhesives. Any additional reactants of the patented claims are encompassed by "comprising" of the instant claims. The polyols of the patentee's claims appear to fall within the scope of those of the instant claims including claim 12. The patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 4, line 23 of their specification. The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 14-17, 19, and 22 based on the definition of average molecular weight. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting

the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. Use of small excess of monomeric diisocyanate encompasses those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21, 24-25, and 31 are encompassed. The use of only 2,4' MDI encompasses the instant claims 1, 6-8, and the other claims reciting isocyanate amounts. Free monomeric isocyanate meets the instant claim 14. The process claims are silent regarding reaction temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29 because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. Claims 4-5, 10-11, 28 and have molecular weights falling within the scope of those of the instant claims. This rejection is therefore maintained.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1-22, 24-25, and 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5994493 Krebs.

Krebs discloses the instantly claimed adhesives and methods of making them at the abstract; column 4, lines 23-67, particularly lines 23-25, 27-32, and 57-60; column 5, lines 5-67; column 6, lines 1-67; column 7, lines 1-67, particularly 1-6; column 10, lines 1-67, particularly 18-45, 53, and 53-67; column 11, lines 1-67, particularly 1-18; column 12, lines 1-67, particularly 11 and 36-39; column 13, lines 1-8; column 14, lines 1-7, particularly 5-7; and the remainder of the document. Moisture curing hotmelt adhesive encompasses the instantly claimed reactive adhesives. Any additional reactants of the patented claims are encompassed by "comprising" of the instant claims. "Liquid" of the patented claims polyol is expected to include "partly crystalline" polyols where the polyols of the patented claims have the upper molecular weights and linear, non-branched segments. These crystalline segments may be solvated by the other amorphous segments to give liquid final product. This reads on the instant claim 12. The patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 7, lines 1-6 of their specification and claims 18 and 29. The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 14-17, 19, and 22

based on the definition of average molecular weight. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. The claimed NCO:OH ratios encompass those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21 and 24-25 are encompassed. The use of only 2,4' MDI encompasses the instant claims 6-8. Free monomeric isocyanate meets the instant claim 14. The process claims are silent regarding reaction temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29 because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Note the definition of "consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. Claim 1 has molecular weights falling within the scope of those of the instant claims. This rejection is therefore maintained.

13. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 5994493 Krebs.

Krebs discloses the instantly claimed adhesives and methods of making them at the abstract; column 4, lines 23-67, particularly lines 23-25, 27-32, and 57-60; column 5, lines 5-67; column 6, lines 1-67; column 7, lines 1-67, particularly 1-6; column 10, lines 1-67, particularly 18-45, 53, and 53-67; column 11, lines 1-67, particularly 1-18; column 12, lines 1-67, particularly 11 and 36-39; column 13, lines 1-8; column 14, lines 1-7, particularly 5-7; and the remainder of the document. Moisture curing hotmelt adhesive encompasses the instantly claimed reactive adhesives. Any additional reactants of the patented claims are encompassed by "comprising" of the instant claims. "Liquid" of the patented claims polyol is expected to include "partly crystalline" polyols where the polyols of the patented claims have the upper molecular weights and linear, non-branched segments. These crystalline segments may be solvated by the other amorphous segments to give liquid final product. This reads on the instant claim 12. The patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 7, lines 1-6 of their specification and claims 18 and 29. The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 14-17, 19, and 22 based on the definition of average molecular weight. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. The claimed NCO:OH ratios encompass those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21 and 24-25 are encompassed. The use of only 2,4' MDI encompasses the instant claims 6-8. Free monomeric

isocyanate meets the instant claim 14. The process claims are silent regarding reaction temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29 because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

It would have at least been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to perform the methods and make the adhesives of the patentee such that they fall within the scope of the instant claims because the patentee's disclosure and claims encompasses the instantly claimed inventions and the instantly claimed adhesives and methods of making them would have been expected to give the properties disclosed by the patentee.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the component of the instant claim 23 in the adhesive of the patentee because Krebs teaches that up to 10% triisocyanate may be used at column 4, lines 40-52 and trimethylolpropane and glycerol are the most common and well known means for achieving such triisocyanate prepolymers by reacting them with the typical well known diisocyanate monomers. It would have at least been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the adhesion promoter of the instant claim 26 because Krebs teaches the use of additives to the adhesive to enhance its properties and aminosilanes having alkoxysilane functionality are well known for giving adhesion promotion to NCO functional hot melt adhesives and would have been expected to provide this function to the adhesives of Krebs.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Note the definition of

"consisting essentially of" in paragraph 2 above, particularly the underlined portion of paragraph 2 above. It is not seen that any additional materials of the copending claims are excluded by "consisting essentially of" because it is not seen that they materially affect the basic and novel characteristic(s)" of the instantly claimed invention. Claim 1 has molecular weights falling within the scope of those of the instant claims. This rejection is therefore maintained.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick D. Niland
Primary Examiner
Art Unit 1714